1884MNRAS..44..450M

Ephemeris for Physical Observations

Greenwich Noon.	Angle of Position of ♃'s Axis.	Latitude of Earth above ♃'s Equator.	Latitude of Sun above ♃'s Equator.	Δ−L.	L−O.	Longitude of ♃'s Central Meridian.	Diff.	Corr. for Phase.
	°	°	°	°	°	°	+ °	°
1884. Oct. 20	22·860	−0·587	−0·327	−8·979	15·125	92·73	4391·26	+0·35
25	23·008	·632	·348	9·368	15·905	163·99	1·33	·38
30	23·143	·676	·369	9·710	16·638	235·32	1·39	·41
Nov. 4	23·266	−0·719	−0·390	−10·001	17·321	306·71	1·45	+0·44
9	23·376	·761	·411	10·239	17·949	18·16	1·52	·46
14	23·474	·801	·431	10·420	18·519	89·68	1·58	·47
19	23·559	·840	·452	10·538	19·028	161·26	1·65	·48
24	23·632	·877	·473	10·590	19·471	232·91	1·73	·49
29	23·692	·912	·493	10·573	19·844	304·64	1·80	·49
Dec. 4	23·741	−0·945	−0·514	−10·484	20·145	16·44	1·87	+0·48
9	23·777	0·975	·534	10·320	20·370	88·31	1·94	·46
14	23·801	1·002	·555	10·078	20·518	160·25	2·01	·44
19	23·813	1·027	·575	9·758	20·586	232·26	2·08	·41
24	23·813	1·049	·596	9·355	20·572	304·34	2·14	·38
29	23·801	1·068	·616	8·871	20·477	16·48	2·20	·34
1885. Jan. 3	23·776	−1·084	−0·637	−8·307	20·302	88·68	4392·26	+0·30
8	23·738	1·096	·657	7·666	20·049	160·94	2·31	·26
13	23·688	1·104	·677	6·949	19·720	233·25	2·35	·21
18	23·626	1·109	·698	6·161	19·319	305·60	2·38	·17
23	23·552	1·110	·718	5·308	18·853	17·98	2·41	·12
28	23·466	1·107	·738	4·398	18·332	90·39	2·42	·08
Feb. 2	23·371	−1·101	−0·758	−3·440	17·763	162·81	2·42	+0·05
7	23·267	1·091	·778	2·444	17·153	235·23	2·41	·03
12	23·155	1·078	·798	1·419	16·515	307·64	2·39	+ ·01
17	23·036	1·063	·818	−0·378	15·861	20·03	2·35	·00
22	22·914	1·045	·838	+0·666	15·202	92·38	2·30	·00
27	22·790	1·025	·858	1·703	14·552	164·68	2·24	−·01
Mar. 4	22·667	−1·003	−0·878	+2·720	13·922	236·92	4392·18	−0·03
9	22·547	0·981	·898	3·706	13·322	309·10	2·10	·06
14	22·433	·958	·918	4·651	12·762	21·20	2·02	·09
19	22·326	·935	·938	5·547	12·252	93·22	1·92	·13
24	22·230	·912	·957	6·384	11·801	165·14	1·83	·18
29	22·147	·890	·977	7·156	11·415	236·97	1·74	·22

1884MNRAS..44..450M

of Jupiter, 1884–85. By A. Marth.

Greenwich Noon.		Diameter Equat.	Diameter Polar.	Difference of limbs in A. R.	Difference of limbs in Decl.	Defect of illumination. Equat.	Defect of illumination. in A. R.	Defect of illumination. in Decl.	*d*	*w*
						preced. limb		north *l*.		
1884.		″	″	s	″	″	s	″	°	°
Oct.	20	33·57	31·43	2·267	31·76	0·21	0·012	0·03	8·98	268·27
	25	33·97	31·80	2·292	32·14	·23	·013	·03	9·37	268·19
	30	34·39	32·20	2·319	32·54	·25	·015	·03	9·72	268·12
Nov.	4	34·83	32·62	2·347	32·97	0·26	0·016	0·04	10·01	268 04
	9	35·31	33·06	2·376	33·42	·28	·017	·04	10·25	267·97
	14	35·80	33·52	2·407	33 89	·30	·018	·04	10·43	267·90
	19	36·32	34·01	2·441	34·39	·31	·018	·04	10·55	267·82
	24	36·86	34·52	2·476	34·90	·31	·019	·04	10·60	267·74
	29	37·42	35·04	2·512	35·43	·32	·019	·04	10·58	267·65
Dec.	4	37·99	35·57	2·550	35·98	0·32	0·019	0·04	10·49	267·56
	9	38·58	36·12	2·588	36·53	·31	·019	·04	10·33	267·47
	14	39·17	36·67	2·627	37·09	·30	·018	·04	10·09	267·36
	19	39·76	37·23	2·667	37·65	·29	·017	·04	9·77	267·25
	24	40·35	37·78	2·707	38·21	·27	·016	·04	9·37	267·11
	29	40·93	38·32	2 746	38·76	·24	·015	·03	8·88	266·96
1885.										
Jan.	3	41·49	38·85	2·785	39·29	0·22	0·013	0·03	8·32	266·79
	8	42·03	39·35	2·822	39·80	·19	·011	·02	7·68	266·57
	13	42·53	39·82	2·857	40·27	·16	·009	·02	6·96	266·26
	18	42·99	40·25	2·890	40·71	·12	·008	·02	6·17	265·89
	23	43·40	40·64	2·920	41·10	·09	·006	·01	5·32	265·44
	28	43·76	40·97	2·946	41·43	·06	·004	·01	4·42	264·92
Feb.	2	44·05	41·24	2·968	41·70	0·04	0·002	·00	3·46	264·0
	7	44·27	41·45	2·986	41·90	·02	·001		2 47	262·2
	12	44·42	41·59	2·999	42·04	·00	·000		1·45	258·5
	17	44·48	41·65	3·006	42·10	following limb.		south	0·46	235·3
	22	44·47	41·64	3·008	42·08	·00	·000	*l*.	0·70	108·4
	27	44·38	41·55	3·005	41·99	·01	·001		1·71	96·0
Mar.	4	44·21	41·40	2·997	41·83	0 03	0·002	0 00	2·72	92·8
	9	43·97	41·17	2·983	41·59	·05	·003	·01	3·71	91·34
	14	43·66	40·88	2·965	41·29	·07	·004	·01	4·65	90·49
	19	43·29	40·53	2·942	40·94	·10	·006	·02	5·55	89 91
	24	42·87	40·14	2·915	40·54	·13	·008	·02	6·38	89·50
	29	42·40	39·70	2·885	40·09	·17	·010	·02	7·16	89·20

1884MNRAS..44..450M

Greenwich Noon.		Angle of Position of ♃'s Axis.	Latitude of Earth above ♃'s Equator.	Latitude of Sun above ♃'s Equator.	Λ−L.	L−O.	Longitude of 's Central Meridian.	Diff.	Corr. for Phase.
1884.		°	°	°	°	°	°	°	°
Apr.	3	22·077	−0·870	−0·977	+7·858	11·098	308·71	4391·63	−0·27
	8	22·023	·851	1·016	8·488	10·853	20·34	1·54	·31
	13	21·985	·834	1·036	9·042	10·684	91·88	1·44	·35
	18	21·964	·819	1·055	9·518	10·593	163·32	1·35	·39
	23	21·960	·806	1·074	9·916	10·580	234·67	1·26	·43
	28	21·973	·796	1·094	10·236	10·644	305·93	1·18	·46
May	3	22·003	−0·789	−1·113	+10·481	10·784	17·11	4391·09	−0·48
	8	22·048	·785	1·132	10·652	10·997	88·20	1·01	·49
	13	22·109	·783	1·151	10·751	11·282	159·21	0·95	·50
	18	22·184	·784	1·170	10·782	11·635	230·16	0·88	·51
	23	22·272	·788	1·189	10·747	12·054	301·04	0·82	·50
	28	22·372	·794	1·208	10·649	12·536	11·86	0·77	·49
June	2	22·482	−0·803	−1·227	+10·492	13·076	82·63	0·72	−0·48
	7	22·602	·815	1·246	10·279	13·672	153·35	0·67	·46
	12	22·729	·829	1·264	10·013	14·321	224·03	0·63	·44
	17	22·863	·846	1·283	9·699	15·019	294·66	0·60	·41
	22	23·002	·865	1·302	9·339	15·762	5·26	0·58	·38
	27	23·145	·886	1·320	8·936	16·547	75·84	0·55	·35
July	2	23·291	−0·910	−1·339	+ 8·494	17·371	146·39	4390·53	−0·31
	7	23·438	0·936	1·357	8·017	18·231	216·92		·28

The angle Λ−L is the difference of the Jovicentric longitudes of the Sun and the Earth, reckoned in the plane of *Jupiter's* equator, L−O+180° the Jovicentric longitude of the Earth reckoned from O, the point of *Jupiter's* vernal equinox or the point of the descending node of the planet's equator on the orbit.

The assumed daily rate of rotation, on which the "Longitude of ♃'s Central Meridian" depends, is 878°·34, the corresponding period being $9^h\,50^m\,20^s{\cdot}25$. This rate represents approximately the motion of the white equatorial spot during the interval from the autumn of 1882 to the spring of 1884. As the great reddish spot has so faded away that its place can only be recognised with difficulty, and the white equatorial spot seems likely to remain a fairly defined feature of *Jupiter's* surface for some time to come, I have thought it better to make the change, and to assume the new First or Zero Meridian near the white spot, so that the predicted times of the passages of the First Meridian across the middle of the disk may serve also for those of the white spot, supposing that the motion of the latter has not

1884MNRAS..44..450M

Greenwich Noon.	Diameter Equat.	Diameter Polar.	Difference of limbs in A. R.	Difference of limbs in Decl.	Defect of illumination. Equat. preced. limb	Defect of illumination. in A. R.	Defect of illumination. in Decl. north *l*.	*d*	*w*
1884.	″	″	s	″	″	s	″	°	°
Apr. 3	41·89	39·22	2·852	39·61	0·20	0·012	0·03	7·86	88·95
8	41·35	38·71	2·816	39·10	·23	·014	·03	8·49	88·74
13	40·79	38·19	2·778	38·57	·25	·015	·03	9·04	88·56
18	40·21	37·65	2·739	38·02	·28	·017	·04	9·52	88·41
23	39·62	37·10	2·699	37·46	·30	·018	·04	9·92	88·26
28	39·03	36·55	2·659	36·90	·31	·019	·04	10·24	88·13
May 3	38·45	36·00	2·618	36·35	0·32	0·020	0·04	10·49	88·02
8	37·87	35·45	2·577	35·80	·33	·020	·04	10·66	87·91
13	37·30	34·92	2·537	35·27	·33	·020	·04	10·76	87·81
18	36·74	34·40	2·498	34·75	·32	·020	·04	10·79	87·72
23	36·20	33·90	2·460	34·24	·32	·019	·04	10·76	87·62
28	35·68	33·41	2·423	33·75	·31	·019	·04	10·66	87·53
June 2	35·19	32·95	2·387	33·28	0·29	0·018	0·04	10·50	87·44
7	34·71	32·50	2·352	32·84	·28	·017	·03	10·29	87·35
12	34·26	32·08	2·319	32·41	·26	·016	·03	10·02	87·25
17	33·83	31·68	2·288	32·01	·24	·015	·03	9·71	87·16
22	33·43	31·30	2·258	31·63	·22	·014	·03	9·35	87·05
27	33·05	30·95	2·230	31·28	·20	·012	·03	8·95	86·95
July 2	32·70	30·62	2·203	30·95	0·18	0·011	0·02	8·51	86·84
7	32·37	30·31	2·178	30·65	·16	·009	·02	8·03	86·73

changed meanwhile too considerably. In the Supplementary Number of vol. xlii. I have given a list of the observed passages of the white spot, which had become known to me up to August 1882, together with the corresponding longitudes of the spot in a system, in which the adopted daily rate of rotation is 878°·46. In order to reduce these longitudes to the system adopted in the present ephemeris, it will be sufficient to apply the corrections derived by interpolation from the following values:—

		Corr.			Corr.			Corr.
1880, Sept.	6·0	+65°·0	1881, July	3·0	+29°·0	1882, Jan.	19·0	+5°·0
Oct.	1	62		28	26	Feb.	13	+2·0
	26	59	Aug.	22	23	Mar.	10	−1·0
Nov.	20	56	Sept.	16	20	Apr.	4	−4·0
Dec.	15	53	Oct.	11	17			
1881, Jan.	9	50	Nov.	5	14	July	13	−16·0
Feb.	3	47		30	11	Aug.	7·0	−19·0
	28·0	+44·0	Dec.	25·0	+8·0			

1884MNRAS..44..450M

It would be premature to enter upon the discussion of the changes of the spot's motion till all the observations of it have become available.

If the "Correction for Phase" is added to the longitude of ♃'s Central Meridian or of the meridian directed to the Earth, the longitude of the meridian is found which bisects the illuminated disk of the planet.

The assumed value of *Jupiter's* equatorial diameter is 37″·60 at the distance 5·20273. The assumed proportion of the polar axis to the equatorial diameter is 0·9363. The defect of illumination of the apparent polar diameter is insensible. The last columns give the values of the auxiliary angles *d* and *w* required in the computations for defect of illumination, as explained in vol. xl., p. 490ff.

The following is a list of the Greenwich mean times, when the assumed First Meridian of *Jupiter* passes the middle of the illuminated disk:—

1884.	h	m	1884.	h	m	1884.	h	m	1884.	h	m
Oct. 20	17	7·9	Oct. 30	13	14·0	Nov. 9	9	19·7	Nov. 19	5	25·0
21	2	58·2		23	4·2		19	9·9		15	15·3
	12	48·4	31	8	54·5	10	5	0·2	20	1	5·5
	22	38·7		18	44·7		14	50·4		10	55·7
22	8	29·0	Nov. 1	4	35·0	11	0	40·5		20	45·9
	18	19·2		14	25·2		10	30·8	21	6	36·1
23	4	9·5	2	0	15·4		20	21·1		16	26·3
	13	59·7		10	5·7	12	6	11·3	22	2	16·5
	23	50·0		19	55·9		16	1·5		12	6·7
24	9	40·2	3	5	46·2	13	1	51·7		21	56·9
	19	30·5		15	36·4		11	42·0	23	7	47·1
25	5	20·8	4	1	26·6		21	32·2		17	37·3
	15	11·0		11	16·9	14	7	22·4	24	3	27·6
26	1	1·3		21	7·1		17	12·6		13	17·8
	10	51·5	5	6	57·4	15	3	2·9		23	8·0
	20	41·8		16	47·6		12	53·1	25	8	58·2
27	6	32·0	6	2	37·8		22	43·3		18	48·4
	16	22·3		12	28·1	16	8	33·5	26	4	38·6
28	2	12·5		22	18·3		18	23·7		14	28·8
	12	2·8	7	8	8·5	17	4	14·0	27	0	19·0
	21	53·0		17	58·8		14	4·2		10	9·2
29	7	43·3	8	3	49·0		23	54·4		19	59·4
	17	33·5		13	39·2	18	9	44·6	28	5	49·6
30	3	23·7		23	29·5		19	34·8		15	39·8

1884MNRAS..44..450M

1884.		h	m	1884.		h	m	1884.		h	m	1885.		h	m
Nov.	29	1	30·0	Dec.	15	10	57·2	Dec.	31	20	23·4	Jan.	16	19	58·5
		11	20·1			20	47·4	1885.					17	5	48·6
		21	10·3		16	6	37·6	Jan.	1	6	13·6			15	38·8
	30	7	0·5			16	27·8			16	3·7		18	1	28·9
		16	50·7		17	2	17·9		2	1	53·9			11	19·0
Dec.	1	2	40·9			12	8·1			11	44·0			21	9·1
		12	31·1			21	58·2			21	34·1		19	6	59·3
		22	21·3		18	7	48·4		3	7	24·3			16	49·4
	2	8	11·5			17	38·6			17	14·4		20	2	39·5
		18	1·7		19	3	28·7		4	3	4·5			12	29·6
	3	3	51·9			13	18·9			12	54·7			22	19·7
		13	42·1			23	9·1			22	44·8		21	8	9·9
		23	32·3		20	8	59·2		5	8	35·0			18	0·0
	4	9	22·4			18	49·4			18	25·1		22	3	50·1
		19	12·6		21	4	39·5		6	4	15·2			13	40·2
	5	5	2·8			14	29·7			14	5·4			23	30·3
		14	53·0		22	0	19·8			23	55·5		23	9	20·4
	6	0	43·2			10	10·0		7	9	45·6			19	10·6
		10	33·4			20	0·2			19	35·8		24	5	0·7
		20	23·6		23	5	50·3		8	5	25·9			14	50·8
	7	6	13·7			15	40·5			15	16·0		25	0	40·9
		16	3·9		24	1	30·6		9	1	6·1			10	31·0
	8	1	54·1			11	20·8			10	56·3			20	21·1
		11	44·3			21	10·9			20	46·4		26	6	11·3
		21	34·5		25	7	1·1		10	6	36·5			16	1·4
	9		24·6			16	51·2			16	26·7		27	1	51·5
		17	14·8		26	2	41·4		11	2	16·8			11	41·6
	10	3	5·0			12	31·5			12	6·9			21	31·7
		12	55·2			22	21·8			21	57·0		28	7	21·8
		22	45·4		27	8	11·8		12	7	47·2			17	11·9
	11	8	35·5			18	2·0			17	37·3		29	3	2·0
		18	25·7		28	3	52·1		13	3	27·4			12	52·1
	12	4	15·9			13	42·3			13	17·5			22	42·3
		14	6·1			23	32·4			23	7·7		30	8	32·4
		23	56·2		29	9	22·6		14	8	57·8			18	22·5
	13	9	46·4			19	12·7			18	47·9		31	4	12·6
		19	36·6		30	5	2·9		15	4	38·0			14	2·7
	14	5	26·7			14	53·0			14	28·2			23	52·8
		15	16·9		31	0	43·1		16	0	18·3	Feb.	1	9	42·9
	15	1	7·1			10	33·3			10	8·4			19	33·0

1884MNRAS..44..450M

1885.	h	m	1885.	h	m	1885.	h	m	1885.	h	m
Feb. 2	5	23·2	Feb. 18	14	47·6	Mar. 7	0	12·8	Mar. 23	9	39·4
	15	13·3	19	0	37·7		10	2·9		19	29·6
3	1	3·4		10	27·9		19	53·1	24	5	19·7
	10	53·5		20	18·0	8	5	43·2		15	9·9
	20	43·6	20	6	8·1		15	33·4	25	1	0·1
4	6	33·7		15	58·2	9	1	23·5		10	50·3
	16	23·8	21	1	48·3		11	13·7		20	40·5
5	2	13·9		11	38·4		21	3·8	26	6	30·7
	12	4·0		21	28·6	10	6	54·0		16	20·9
	21	54·1	22	7	18·7		16	44·1	27	2	11·1
6	7	44·2		17	8·8	11	2	34·3		12	1·3
	17	34·4	23	2	58·9		12	24·4		21	51·5
7	3	24·5		12	49·0		22	14·6	28	7	41·7
	13	14·6		22	39·2	12	8	4·8		17	31·9
	23	4·7	24	8	29·3		17	54·9	29	3	22·1
8	8	54·8		18	19·4	13	3	45·1		13	12·3
	18	44·9	25	4	9·5		13	35·2		23	2·5
9	4	35·0		13	59·7		23	25·4	30	8	52·7
	14	25·1		23	49·8	14	9	15·5		18	42·9
10	0	15·2	26	9	39·9		19	5·7	31	4	33·1
	10	5·4		19	30·1	15	4	55·9		14	23·3
	19	55·5	27	5	20·2		14	46·0	Apr. 1	0	13·5
11	5	45·6		15	10·3	16	0	36·2		10	3·7
	15	35·7	28	1	0·5		10	26·4		19	53·9
12	1	25·8		10	50·6		20	16·5	2	5	44·1
	11	15·9		20	40·7	17	6	6·7		15	34·3
	21	6·0	Mar. 1	6	30·9		15	56·9	3	1	24·5
13	6	56·1		16	21·0	18	1	47·0		11	14·7
	16	46·3	2	2	11·1		11	37·2		21	5·0
14	2	36·4		12	1·3		21	27·4	4	6	55·2
	12	26·5		21	51·4	19	7	17·6		16	45·4
	22	16·6	3	7	41·5		17	7·7	5	2	35·6
15	8	6·7		17	31·7	20	2	57·9		12	25·8
	17	56·8	4	3	21·8		12	48·1		22	16·0
16	3	46·9		13	11·9		22	38·3	6	8	6·3
	13	37·0		23	2·1	21	8	28·4		17	56·5
	23	27·2	5	8	52·2		18	18·6	7	3	46·7
17	9	17·3		18	42·4	22	4	8·8		13	36·9
	19	7·4	6	4	32·5		13	59·0		23	27·2
18	4	57·5		14	22·7		23	49·2	8	9	17·4

1884MNRAS..44..450M

1885.		h	m
Apr.	8	19	7·6
	9	4	57·8
		14	48·1
	10	0	38·3
		10	28·5
		20	18·8
	11	6	9·0
		15	59·2
	12	1	49·5
		11	39·7
		21	29·9
	13	7	20·2
		17	10·4
	14	3	0·6
		12	50·9
		22	41·1
	15	8	31·4
		18	21·6
	16	4	11·9
		14	2·1
		23	52·4
	17	9	42·6
		19	32·9
	18	5	23·1
		15	13·4
	19	1	3·6
		10	53·9
		20	44·0
	20	6	34·3
		16	24·6
	21	2	14·9
		12	5·2
		21	55·4
	22	7	45·7
		17	35·9
	23	3	26·2
		13	16·5
		23	6·7
	24	8	57·0
		18	47·2
Apr.	25	4	37·5
		14	27·8
	26	0	18·1
		10	8·3
		19	58·6
	27	5	48·9
		15	39·1
	28	1	29·4
		11	19·7
		21	10·0
	29	7	0·2
		16	50·5
	30	2	40·8
		12	31·1
		22	21·3
May	1	8	11·6
		18	1·9
	2	3	52·2
		13	42·4
		23	32·7
	3	9	23·0
		19	13·3
	4	5	3·6
		14	53·9
	5	0	44·2
		10	34·4
		20	24·7
	6	6	15·0
		16	5·3
	7	1	55·6
		11	45·9
		21	36·2
	8	7	26·5
		17	16·8
	9	3	7·1
		12	57·4
		22	47·7
	10	8	38·0
		18	28·2
	11	4	18·5
May	11	14	8·8
		23	59·1
	12	9	49·4
		19	39·8
	13	5	30·1
		15	20·4
	14	1	10·7
		11	1·0
		20	51·3
	15	6	41·6
		16	31·9
	16	2	22·2
		12	12·5
		22	2·8
	17	7	53·1
		17	43·4
	18	3	33·7
		13	24·0
		23	14·4
	19	9	4·7
		18	55·0
	20	4	45·3
		14	35·6
	21	0	25·9
		10	16·2
		20	6·5
	22	5	56·9
		15	47·2
	23	1	37·5
		11	27·8
		21	18·1
	24	7	8·5
		16	58·8
	25	2	49·1
		12	39·4
		22	29·7
	26	8	20·1
		18	10·4
	27	4	0·7
		13	51·0
May	27	23	41·4
	28	9	31·7
		19	22·0
	29	5	12·3
		15	2·7
	30	0	53·0
		10	43·3
		20	33·6
	31	6	24·0
		16	14·3
June	1	2	4·6
		11	55·0
		21	45·3
	2	7	35·6
		17	25·9
	3	3	16·3
		13	6·6
		22	56·9
	4	8	47·3
		18	37·6
	5	4	27·9
		14	18·3
	6	0	8·6
		9	58·9
		19	49·3
	7	5	39·6
		15	30·0
	8	1	20·3
		11	10·6
		21	1·0
	9	6	51·3
		16	41·6
	10	2	32·0
		12	22·3
		22	12·7
	11	8	3·0
		17	53·3
	12	3	43·7
		13	34·0
		23	24·4

1884MNRAS..44..450M

1885.	h	m	1885.	h	m	1885.	h	m	1885.	h	m
June 13	9	14·7	June 19	12	49·9	June 25	6	34·8	July 1	0	19·7
	19	5·1		22	40·2		16	25·1		10	10·1
14	4	55·4	20	8	30·6	26	2	15·5		20	0·4
	14	45·7		18	20·9		12	5·8	2	5	50·8
15	0	36·1	21	4	11·3		21	56·2		15	41·2
	10	26·4		14	1·6	27	7	46·6	3	1	31·5
	20	16·8		23	52·0		17	36·9		11	21·9
16	6	7·1	22	9	42·3	28	3	27·3		21	12·2
	15	57·5		19	32·7		13	17·6	4	7	2·6
17	1	47·8	23	5	23·0		23	8·0		16	52·9
	11	38·2		15	13·4	29	8	58·3	5	2	43·3
	21	28·5	24	1	3·7		18	48·7		12	33·7
18	7	18·9		10	54·1	30	4	39·0		22	24·0
	17	9·2		20	44·4		14	29·4	6	8	14·4
19	2	59·6									

In case the remnant of the great reddish spot retains approximately the rate of motion at which it shifted during the interval from the autumn of 1882 to the spring of 1884, its place may be looked for near the Central Meridian at the times which precede or follow the predicted passages of the First Meridian by the interval indicated in the following table:—

1884,	Nov. 14	1885,	Feb. 12	Mar. 29	May 13	4 h.	before	F.M.
	19	Jan. 3	17	Apr. 3	18	3	"	"
	23	7	21	7	22	2	"	"
	28	12	26	12	27	1	"	"
Oct. 19	Dec. 3	17	Mar. 3	16	31	0	"	"
23	7	21	7	21	June 5	1	after	"
28	12	26	12	26	9	2	"	"
Nov. 1	16	30	16	30	14	3	"	"
6	21	Feb. 4	21	May 5	19	4	"	"
11	25	8	25	9	23	5	"	"
15	30	13	29	14	28	6	"	"

1884MNRAS..44..450M

Ephemerides of the Satellites of Saturn, 1884–85. By A. Marth.

(Continued from page 438.)

Differences of Right Ascension and Declination between the Satellites Titan, Hyperion, and Iapetus, and the Centre of Saturn.

		Titan.		*Hyperion.*		*Iapetus.*	
0h Gr. 1884.		α_6-A s	δ_6-D ″	α_7-A s	δ_7-D ″	α_8-A s	δ_8-D ″
Nov.	1	+14·22	− 7·3	+ 3·05	−107·7	+35·33	+ 16·7
	2	+14·42	+ 27·7	+ 7·87	− 96·9	37·14	31·6
	3	+12·40	+ 58·4	+12·15	− 79·0	+38·72	+ 46·4
	4	+ 8·40	+ 79·9	+15·61	− 56·1	40·08	61·0
	5	− 3·02	+ 88·4	+18·12	− 29·1	+41·21	+ 75·2
	6	− 2·87	+ 82·2	+19·48	− 0·4	42·10	89·1
	7	− 8·29	+ 62·1	+19·63	+ 28·4	+42·74	+102·5
	8	−12·35	+ 31·6	+18·51	+ 55·4	43·12	115·4
	9	−14·41	− 4·2	+16·15	+ 78·7	+43·25	+127·6
	10	−14·17	− 39·4	+12·62	+ 96·5	43·12	139·1
	11	−11·75	− 68·7	+ 8·09	+106·7	+42·74	+149·8
	12	− 7·58	− 87·8	+ 2·87	+107·7	42·10	159·7
	13	− 2·29	− 94·3	− 2·63	+ 98·4	+41·20	+168·7
	14	+ 3·33	− 87·3	− 7·85	+ 78·7	40·05	176·6
	15	+ 8·48	− 68·0	−12·16	+ 49·7	+38·66	+183·6
	16	+12·46	− 38·8	−14·97	+ 14·6	37·04	189·5
	17	+14·61	− 4·1	−15·88	− 22·4	+35·19	+194·2
	18	+14·58	+ 31·4	−14·82	− 56·8	33·12	197·8
	19	+12·29	+ 62·0	−12·01	− 84·7	+30·85	+200·2
	20	+ 8·05	+ 82·8	− 7·91	−103·5	28·37	201·4
	21	+ 2·48	+ 90·1	− 3·03	−112·5	+25·72	+201·3
	22	− 3·50	+ 82·2	+ 2·13	−111·6	22·91	200·0
	23	− 8·92	+ 60·6	+ 7·14	−102·0	+19·95	+197·4
	24	−12·85	+ 28·7	+11·65	− 85·0	16·85	193·6
	25	−14·69	− 7·9	+15·37	− 62·3	+13·65	+188·5
	26	−14·19	− 43·3	+18·13	− 35·4	10·35	182·2
	27	−11·51	− 72·2	+19·72	− 6·3	+ 6·99	+174·7
	28	− 7·12	− 90·3	+20·07	+ 23·2	3·57	166·1
	29	− 1·68	− 95·4	+19·16	+ 51·3	+ 0·13	+156·4
	30	+ 4·01	− 87·0	+16·96	+ 76·0	− 3·32	+145·6
Dec.	1	+ 9·13	− 66·2	+13·55	+ 95·3	− 6·75	+133·8
	2	+12·95	− 35·7	+ 9·11	+107·3	10·13	121·1
	3	+14·87	− 0·3	+ 3·90	+110·2	−13·45	+107·6